

## Center for Regulatory Effectiveness

BRASIL

Av. Paulista, 2300 – Andar Pilotis

Cerqueria Cesar

São Paulo

01310-300

Tel: (11)6847-4984 Fax: (11)6847-4550

[contact@cre.org.br](mailto:contact@cre.org.br) [www.CRE.org.br](http://www.CRE.org.br)

### **Comments by CRE Brazil on *Monitoring Guide for Seismic Maritime Research Marine Biota* (October 2007), Ministry of the Environment and Renewable Natural Resources, Board of Environmental Licensing, Petroleum and Gas General Coordination**

The Center for Regulatory Effectiveness-Brasil ("CRE") appreciates the opportunity to submit these comments on the comments version of IBAMA's Seismic Monitoring Guide. We compliment the authors of the Monitoring Guide for their excellent work on a complex and important issue. We hope that these comments will be useful to the authors in producing a final Monitoring Guide.

CRE-Brazil is a NGO(non-government organization) chartered under the laws of Brasil and is dedicated to increasing the transparency and quality of Brazilian regulations.

As discussed below, we have four main comments.

First, we suggest that IBAMA require use of Passive Acoustic Monitoring ("PAM") during night operations or during times of poor visibility. The United States National Oceanic and Atmospheric Administration/National Marine Fisheries Service ("NOAA/NMFS"), which had been very skeptical of PAM, is now sufficiently confident in PAM to require it for seismic operations during night or poor visibility conditions.

Second, we suggest that IBAMA delete the 1000 meter Safeguard area, and rigorously enforce the 500 meter Security Area. The extra 500 meters of the Safeguard Area are unnecessary to protect marine mammals or turtles, would create unnecessarily impair seismic operations, and would be difficult to monitor.

Third, we are concerned about the feasibility of the visual observer educational requirements set forth at page 8 of the Monitoring Guide. These educational requirements could prevent the use of experienced and effective observers. We are also not sure that it would be possible to find visual observers with this high level of education. We suggest that this requirement be eliminated.

Fourth, seismic oil and gas operations pose little threat to marine mammals, in contrast to commercial fishing bycatch, which is a major threat. We suggest that IBAMA's limited and valuable resources concentrate on preventing bycatch of marine mammals.

Each of these points is discussed below.

### ***Oil and Gas Seismic Has Little Effect on Marine Life When a 500 Meter Exclusion Zone Is Required***

The oil and gas industry has conducted seismic surveys for decades in most United States Outer Continental Shelf ("OCS") regions. The United States Minerals Management Service ("MMS") recently produced an Environmental Impact Statement ("EIS") supporting continued oil and gas exploration and production in the U.S. OCS. With regard to the effect of oil and gas seismic operations on marine life, the MMS EIS repeatedly and correctly states that there is no evidence of any harm to marine mammals from many years of seismic surveys. Some of these statements follow, arranged by U.S. OCS region:

#### ***"Gulf of Mexico Region***

*... there have been no documented instances of deaths, physical injuries, or physiological effects on marine mammals from seismic surveys(MMS, 2004b)."*<sup>1</sup>

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*"Although seismic surveys have been conducted in the northern Gulf with some regularity for decades, there is currently no evidence that significant adverse behavioral*

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<sup>1</sup> U.S.MMS' Draft Environmental Impact Statement for 2007-2012 OIL AND GAS PROGRAM in U.S. Outer Continental Shelf ("DEIS"), 71 Fed. Reg. 50457 (August 25, 2006), at page IV-41, available online at [http://www.mms.gov/5-Year/2007-2012\\_DEIS.htm](http://www.mms.gov/5-Year/2007-2012_DEIS.htm).

impacts attributable to seismic surveys are occurring to marine mammals in the Gulf of Mexico (MMS, 2004b).

While a seismic survey may affect more than one individual, routine surveys are not expected to result in population-level effects. Individuals disturbed by or experiencing masking due to a survey would likely return to normal behavioral patterns after the survey has ceased (or after the animal has left the survey area). Because cetaceans are highly mobile species, they may be expected to quickly leave an area when a seismic survey is initiated, thereby greatly reducing their exposure to maximal sound levels and, to a lesser extent, masking frequencies." <sup>2</sup>

### **"Arctic Subregion**

...there is no evidence to suggest that routine surveys may result in population-level effects for any of the affected marine mammal species. There have been no documented instances of deaths, physical injuries, or physiological effects on marine mammals from seismic surveys (MMS 2004a)." <sup>3</sup>

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"While some individuals may move to avoid a particular activity, a significant change in seasonal distribution of the bowhead whale is unlikely (NMFS, 2001b). The OCS activities conducted in the Beaufort Sea as a result of Federal lease sales since 1979 have not apparently had adverse effects on the bowhead whale population. No bowhead whale mortality has been reported over this time, while the bowhead whale population has continued to increase over this period even in the face of energy-related activities and subsistence hunting (MMS, 2001a, 2004a)." <sup>4</sup>

### **"Bering Sea Subregion**

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<sup>2</sup> DEIS at page IV-41

<sup>3</sup> DEIS at page IV-115.

<sup>4</sup> DEIS at page IV-123.

*There have been no documented instances of deaths, physical injuries, or physiological effects on marine mammals from seismic surveys (MMS, 2004a). There is currently no evidence to suggest that routine surveys may result in population-level effects in marine mammals.”*<sup>5</sup>

### **“South Alaska Subregion**

*“There have been no documented instances of deaths, physical injuries, or physiological effects on marine mammals from seismic surveys (MMS, 2004b). There is currently no evidence to suggest that routine surveys may result in population-level effects in marine mammals.”*<sup>6</sup>

As demonstrated by the Environmental Impact Statement language quoted above, the MMS correctly concludes that oil and gas seismic surveys do not harm marine mammals when the surveys use traditional mitigation measures. These measures include a 500 meter safety radius: *i.e.*, the airguns stop when marine mammals are visually observed to be within a 500 meter radius of the vessel running the survey. The best available science and data demonstrate that there is no need for any larger safety radius.

The MMS seismic airgun requirements in the Gulf of Mexico are available online at <http://www.gomr.mms.gov/homepg/regulate/regs/ntls/2007NTLs/07-g02.pdf>. For the reader’s convenience a copy of these requirements is attached as appendix A.

The 500 meter safety radius is not limited to U.S regulatory agencies. It is internationally used and accepted. For example, 500 meters is the only safety radius required by the Joint Nature Conservation Committee (“JNCC”): *Guidelines for Minimising Acoustic Disturbance to Marine Mammals from Seismic Surveys* (April 2004), Section 2-2. The JNCC Guidelines are available online at [http://www.jncc.gov.uk/pdf/Seismic\\_survey\\_guidelines\\_200404.pdf](http://www.jncc.gov.uk/pdf/Seismic_survey_guidelines_200404.pdf). For the reader’s convenience, we also attach a copy of the JNCC Guidelines as appendix B.

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<sup>5</sup> DEIS at page IV-123.

<sup>6</sup> DEIS at page IV-131.

We are unaware of any regulatory authority that requires a 500 meter Safeguard area in addition to the universal 500 meter Security area.

Use of what amounts to a 1000 meter radius could seriously impede the use of seismic to locate oil and gas deposits, and would be difficult to monitor.

### ***IBAMA Should Require PAM at Night and During Times of Poor Visibility***

Section 3.8 of the Monitoring Guide states that seismic operations may be prohibited at night in areas where there may be vulnerable marine life if there is no operational PAM.

The United States regulatory authorities have questioned the use of PAM to supplement visual observations of marine mammals. Now, however, the U.S. regulatory authorities are sufficiently confident in PAM to require its use by seismic operators at night or in times of poor visibility. The U.S. NOAA/NMFS recently required PAM for seismic surveys off the coast of Central America:

*"PAM will take place to complement the visual monitoring program. Visual monitoring typically is not effective during periods of bad weather or at night, and even with good visibility, is unable to detect marine mammals when they are below the surface or beyond visual range. Acoustic monitoring can be used in addition to visual observations to improve detection, identification, localization, and tracking of cetaceans. It is only useful when marine mammals call, but it can be effective either by day or by night and does not depend on good visibility. The acoustic monitoring will serve to alert visual observers (if on duty) when vocalizing cetaceans are detected. It will be monitored in real time so visual observers can be advised when cetaceans are detected. When bearings (primary and mirror-image) to calling cetacean(s) are determined, the bearings will be relayed to the visual observer to help him/her sight the calling animal(s)."*

72 Fed. Reg. 71625, 71641 (Dec. 18, 2007).

These new PAM requirements imposed by NOAA/NMFS contain detailed protocols. They are set forth in their entirety as appendix C. We suggest that IBAMA incorporate

them into the Monitoring Guide, and allow seismic operations during night or other poor visibility conditions only when PAM is used in accordance with the NOAA/NMFS protocols, adopted by IBAMA.

### ***The Visual Observer Educational Requirements Should Not Be Required***

Section 3.1 of the Monitoring Guide states, "All the On Board Observers must be graduated in a compatible area with their function, such as Biology, Oceanography, Fishing Engineering or Veterinary Medicine."

The U.S. regulatory authorities and the JNCC do not require this high level of formal education for On Board Observers. These requirements would prevent the use of many experienced and productive observers because they do not have this level of formal education. It is not clear that seismic operators could find sufficient numbers of On Board Observers who meet these standards.

For these reasons, we suggest that IBAMA not impose these educational requirements for On Board Observers.

### ***IBAMA Should Concentrate on Bycatch***

The international scientific and evidentiary record demonstrates that a seismic operation with a 500 meter safety zone and PAM does not hurt marine life. The record also demonstrates that commercial fishing, which is largely unregulated, does hurt marine life.

Bycatch in commercial fishing nets kills an estimated 500,000 marine mammals per year. See Read, *et al.*, "Bycatches of Marine Mammals in U.S. Fisheries and a First Attempt to Estimate the magnitude of Global Marine Mammal By-Catch," submitted to World Wildlife Fund-US in 2005. A copy of this document is available online at <http://cc.msnsnscache.com/cache.aspx?q=72739447318542&mkt=en-US&lang=en-US&w=605bfbd6&FORM=CVRE3>. For the reader's convenience, a copy is also attached as appendix D.

We suggest that IBAMA focus its limited and valuable resources on protecting marine mammals from commercial

fishing bycatch. CRE-Brasil would be pleased to assist IBAMA in any way appropriate in stopping this carnage.

### ***Conclusion***

We greatly appreciate the opportunity to submit these written comments. We hope to discuss this issue further with IBAMA.

Sincerely,

Jim Tozzi, Ph.D.  
President

#### Attachments

Tozzi [http://www.thecre.com/emerging/Jim\\_Tozzi\\_Bio.html](http://www.thecre.com/emerging/Jim_Tozzi_Bio.html)